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SF - PUC
Water Dept

INSTALLING RETROFIT WATER- SAVING DEVICES

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- c) Low-flow toilets (3.5 gallons per flush or
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Water Dept

INSTALLING RETROFIT WATER-SAVING DEVICES

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RETROFIT is installing devices that reduce the amount of water used by showers, faucets and toilets. These devices allow you to save water and money without having to change your water-use habits. San Francisco City Ordinances 185-91, 346-91 and 359-91 requires that you install the following items in your commercial establishment, multi-family units, and/or single-family home. All accounts that have not been retrofitted and do not have an affidavit on file at SFWD, will receive a higher water rate of 58 additional cents per 748 gallons, beginning March 1.

- a) Low-flow devices on all accessible showerheads allowing a maximum flow of not more than 2.5 gallons per minute. Showerheads of the ball-joint type that cannot easily be removed from the wall without structural alteration are exempt from this ordinance.
- b) Aerators attached to sink faucets which are designed to accept such devices. These aerators shall include a flow restrictor.
- c) Low-flow toilets (3.5 gallons per flush or less) or approved devices such as quick-closing flapper devices, dual-flush option systems or toilet dams.

Once you have installed these devices in your building and/or home, you are required to fill out the enclosed conservation affidavit and send it to San Francisco Water Department, Attention: Water Conservation Unit, P.O. Box 7562, San Francisco, CA 94120-7562.

Determining Flow Rate

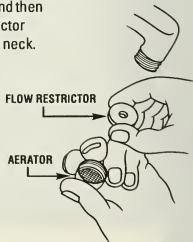
Commercial buildings, multi-family and single family residences that have been sold within the last three years should have already been retrofitted with these devices. To find out whether your building or home already meet these standards, test the flow of your faucets and showerheads.

You can easily figure out the flow rate of your faucet or shower with a gallon-size bucket and a watch with a second hand. If your faucet or shower fills the gallon bucket in less than 24 seconds, its rate is more than 2.5 gallons per minute.

Sinks

The average kitchen, bathroom, utility, and vanity sink faucet uses 5 gallons of water per minute. By retrofitting your faucet, you can reduce the flow to 2.5 gallons of water per minute. Aerators with restrictors reduce the amount of water from a faucet. A restrictor is a small metal or plastic disk with a hole in the middle or small holes along the edge. The restrictor fits between the washer and screen which is the aerator.

To install a restrictor, you may want to use these tips. The faucet head is where the water comes out of the spigot. You can usually remove the faucet head from the pipe (stem) of the faucet by hand or with pliers. To keep from marring the faucet, you should first wrap masking tape around visible nuts, neck and handles before you begin retrofitting the faucet. Most faucet heads come off by hand, but you may need to use wide grip pliers to remove sticky faucet heads. If the faucet neck has inside threads or ridges, just turn the water saving restrictor clockwise onto the neck. For faucets with outside threads, first remove the top washer from the faucet to expose the inside threads and then tighten the restrictor onto the faucet's neck.

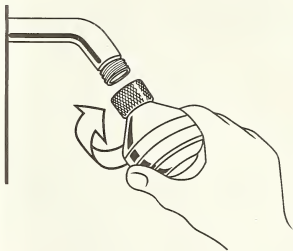


Showerheads

The average showerhead uses 5 gallons per minute. By installing a low-flow showerhead, you can save 2.5 gallons per minute or 18 gallons per shower. City Ordinances 185-91, 346-91 and 359-91 requires that you install low-flow devices that allow a maximum flow of not more than 2.5 gallons per minute. Showerheads of the ball-joint type that cannot easily be removed from the wall without structural alteration are exempt from this requirement.

You may want to install new showerheads. Since 1991, state law requires that all new showerheads being sold in California, must have a maximum flow rate of less than 2.5 gallons per minute. So all showerheads sold in California at this time should meet the requirement. It is best to buy medium to high quality showerheads, since the average showerhead lasts approximately five years.

Here are some tips in installing a new showerhead. To keep from marring the showerhead, you may want to first wrap masking tape around visible nuts and neck before you begin this project. Remove the old showerhead by turning it counter-clockwise. If you are not able to do it by hand, you may need to use a wide grip pliers to remove the showerhead. Then install the showerhead by turning it onto the neck clockwise. If your shower's neck does not have threads, you will need to use a universal shower adaptor. If your new showerhead does not cover all of the threads on your shower's neck, put teflon tape or pipe joint compound on the exposed treads.



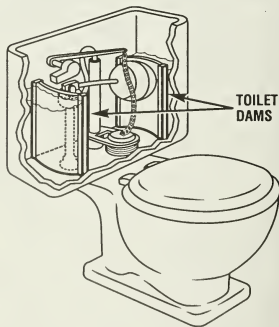
Be sure to read the directions on the tape or compound for proper use. These will seal the joints and create a leak-proof shower for your home.

Instead of showerheads, you may want to install flow-control inserts. These are similar to washers and are inserted between the showerhead and the neck. Just remove the showerhead and slip the flow-control insert underneath the washer on the shower. Then tighten the showerhead back onto the neck.

Toilets

This fixture is responsible for 40% of the water usage in the average home. The average toilet uses 5 to 7 gallons of water per flush. Currently, only toilets that use 1.6 gallons or less can be sold in California.

The approved devices are toilet dams, dual-flush option systems, quick-closing flapper devices or any permanently installed device that reduces water used per flush. These are to be installed in your toilet's tank if your toilet uses more than 3.5 gallons per flush. The most common type of flush reducers are toilet dams. These dams can save 1.5 gallons of water per flush, depending on your toilet. Properly installed, they help you use less water but still produce a powerful flush.



To understand how a toilet dam works, let's review the workings of a toilet. Inside your toilet, there is a drain valve with a flapper. When you flush, the flapper is lifted up and the water inside the tank goes into the bowl. The flapper then closes the valve and water runs into the tank from your home's plumbing. As the water comes into the tank, it pushes up the float arm until it reaches a certain level. The water is then automatically shut off. The intent of the dam is to reduce the area of the tank that the water needs to fill.

The first step is to turn off your water supply valve and flush the toilet for easier installation. Then carefully remove the top of the toilet tank. Place one dam in a U-shape on the left side of the tank. The dam's edges should press against the bottom and the sides of the tank, and should curve behind the overflow tube. Be sure that the dam is not interfering with the toilet's moving parts.

Place the other dam in a U-shape on the right side of the tank. Again, make sure that the dam's edges are pressed against the bottom and sides of the tank. The dam should be next to, but not impeding the flapper and drain valve. It should also not impede the bulb of the float arm.

After you have placed the dams, turn on the water valve. Flush the toilet and observe flushing action. If the flush is not adequate, either move the toilet dams farther away from the drain valve, or take out the dam nearest the overflow tube.

Questions???

If you have any questions about your plumbing, contact your plumbing contractor for guidance.

If you have questions about Ordinances 185-91, 346-91 and 359-91, contact the San Francisco Water Department's Water Conservation Unit at 923-2571.



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